

# Can ChatGPT draft a research article? An example of population-level vaccine effectiveness analysis

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## Abstract

We reflect on our experiences of using Generative Pre-trained Transformer ChatGPT, a chatbot launched by OpenAI in November 2022, to draft a research article. We aim to demonstrate how ChatGPT could help researchers to accelerate drafting their papers. We created a simulated data set of 100 000 health care workers with varying ages, Body Mass Index (BMI), and risk profiles. Simulation data allow analysts to test statistical analysis techniques, such as machine-learning based approaches, without compromising patient privacy. Infections were simulated with a randomized probability of hospitalisation. A subset of these fictitious people was vaccinated with a fictional vaccine that reduced this probability of hospitalisation after infection. We then used ChatGPT to help us decide how to handle the simulated data in order to determine vaccine effectiveness and draft a related research paper. AI-based language models in data analysis and scientific writing are an area of growing interest, and this exemplar analysis aims to contribute to the understanding of how ChatGPT can be used to facilitate these tasks.